

Supplementary table 1: Search strategy for all database

a) Medline (via PubMed) 244 records 1. "Accidents, Traffic"[mh] OR "Accidents, Traffic"[mh] OR Traffic Accidents[tiab] OR Accident, Traffic[tiab] OR Traffic Accident[tiab] OR Traffic Accidents[tiab] OR Accident, Traffic[tiab] OR Traffic Accident[tiab] OR accident traffic[tiab] OR accident, road[tiab] OR accident, streetcar[tiab] OR accident, traffic[tiab] OR accidents, traffic[tiab] OR automobile accident[tiab] OR automobile collision[tiab] OR car accident[tiab] OR motor vehicle accident[tiab] OR motor car accident[tiab] OR motorcycle accident[tiab] OR road accident[tiab] OR street car accident[tiab] OR vehicle accident[tiab] OR vehicular accident[tiab] OR traffic injury[tiab] OR road traffic injury[tiab] OR road traffic accident*[tiab] OR road traffic injur*[tiab] OR traffic crash*[tiab] 2. "Mortality"[mh] OR "Death"[mh] OR Mortality[tiab] OR Mortalities[tiab] OR Death[tiab] 3. "Iran"[mh] OR Iran[tiab] OR Iranian people[tiab] OR Iranian[tiab] OR Iran[AD] 4. #1 AND #2 AND #3
b) Embase 563 records 1. 'traffic accident'/exp OR 'traffic accident' OR 'traffic injury'/exp OR 'traffic injury' OR 'road traffic injury' OR 'road traffic injur*' OR 'traffic crash*' OR 'car accident' OR 'road injur*' OR 'motor accident' 2. 'mortality'/exp OR 'mortality' OR 'death'/exp OR 'death' OR 'cause of death'/exp OR 'cause of death' 3. 'iran'/exp OR 'iran' OR 'iranian people'/exp OR 'iranian people' OR 'iranian (citizen)'/exp OR 'iranian (citizen)' OR iran:ff 4. #1 AND #2 AND #3
c) Scopus 496 records 1. (TITLE-ABS-KEY ("Traffic Accidents") OR TITLE-ABS-KEY ("Traffic Accident") OR TITLE-ABS-KEY ("automobile accident") OR TITLE-ABS-KEY ("automobile collision") OR TITLE-ABS-KEY ("car accident") OR TITLE-ABS-KEY ("motor vehicle accident") OR TITLE-ABS-KEY ("motor car accident") OR TITLE-ABS-KEY ("motorcycle accident") OR TITLE-ABS-KEY ("road accident") OR TITLE-ABS-KEY ("street car accident") OR TITLE-ABS-KEY ("vehicle accident") OR TITLE-ABS-KEY ("vehicular accident") OR TITLE-ABS-KEY ("traffic injury") OR TITLE-ABS-KEY ("road traffic injury") OR TITLE-ABS-KEY ("road traffic accident*") OR TITLE-ABS-KEY ("road traffic injur*") OR TITLE-ABS-KEY ("traffic crash*") OR TITLE-ABS-KEY ("road Injur*")) 2. ((TITLE-ABS-KEY ("mortality") OR TITLE-ABS-KEY ("death") OR TITLE-ABS-KEY ("cause of death"))) 3. ((TITLE-ABS-KEY ("Iran") OR TITLE-ABS-KEY ("Iranian people") OR TITLE-ABS-KEY ("Iranian") OR AFFIL (Iran))) 4. #1 AND #2 AND #3
d) Web of Science 227 records 1. TS=("Traffic Accidents" OR "Traffic Accident" OR "automobile accident" OR "automobile collision" OR "car accident" OR "motor vehicle accident" OR "motor car accident" OR "motorcycle accident" OR "road accident" OR "street car accident" OR "vehicle accident" OR "vehicular accident" OR "traffic injury" OR "road traffic injury" OR "road traffic accident*" OR "road traffic injur*" OR "traffic crash*" OR "road Injur*") 2. TS=("mortality" OR "death" OR "cause of death") 3. TS=("Iran" OR "Iranian people" OR "Iranian" OR Iran) 4. #1 AND #2 AND #3

Supplementary table 2: Details of odds ratio and 95% confidence interval for association of gender and age with traffic crash related mortality among included studies

Study	Odds ratio	95% confidence interval	
Sex			
Bakhtiyari	0.6	0.57	0.62
Bakhtiyari	1.6	1.39	1.81
Hasani	2.26	1.6	3.1
Hasani	1.89	0.63	5.6
Hosseinpour	2.18	1.42	3.33
KhosraviShademani	2.77	2.58	2.96
KhosraviShademani	1.03	0.756	1.304
Mehmandar	2.65	0.93	7.57
Moradi	1.44	0.83	2.5
Moradi	2.07	1.31	3.27
Nasiri	1.184	0.8	1.76
Paravar	3.387	0.8	14.3
Sherafati	2.657	0.86	8.21
Sherafati	0.639	0.058	7.075
Taravatmanesh	1.37	0.81	2.3
Yadollahi	1.67	1.24	2.24
Pooled odds ratio	1.66	1.029	2.677
Age			
Bakhtiyari	1	0.99	1.5
Bakhtiyari	1.004	1.002	1.006
Ghaem	1.4	1.03	1.5
KhosraviShademani	1	0.998	1.002
KhosraviShademani	1.02	1.016	1.024
Moradi	1	0.99	1.01
Moradi	1.03	1.02	1.04
Mousazadeh	1.001	1	1.001
Paravar	1.07	0.45	2.6
Sherafati	1.181	0.77	1.813
Sherafati	1.2	0.932	1.544
Taravatmanesh	1.01	0.99	1.03
Yousefzadeh	1.06	1.02	1.09
Pooled odds ratio	1.009	1.004	1.015
Less than 25 years			
Hasani	2.06	0.28	15
Hasani	1.6	0.85	3.07
Hosseinpour	1.29	0.72	2.3
Tavakoli	0.84	0.74	0.945
Tavakoli	0.86	0.737	0.993
Pooled odds ratio	0.908	0.777	1.06

25-65 years			
Bakhtiyari	0.77	0.6	0.97
Bakhtiyari	2.48	2.2	2.81
Bakhtiyari	0.75	0.71	0.8
Hasani	2.04	1.26	3.3
Hasani	1.09	0.62	1.9
Hasani	1.4	0.27	7.3
Hasani	3.1	0.78	12.2
Hosseinpour	2.83	1.51	5.68
Hosseinpour	1.7	0.98	2.95
Hosseinpour	1.71	0.94	3.09
Hosseinpour	2.51	1.36	4.66
Mehmandar	1.8	1.39	2.33
Mehmandar	1.87	1.37	2.55
Mehmandar	1.67	1.26	2.21
Nasiri	1.6	0.74	3.4
Nasiri	1.8	1.05	3.1
Tavakoli	1.2	1.017	1.405
Yadollahi	1.4	0.89	2.2
Yadollahi	3.2	2.09	4.88
Yadollahi	1.81	1.16	2.82
Yadollahi	1.28	0.88	1.85
Pooled odds ratio	1.646	1.249	2.169
More than 65 years			
Hasani	4.8	2.9	7.9
Hasani	5.3	0.9	31.6
Hosseinpour	4.79	2.49	9.22
Hosseinpour	5.38	2.66	10.87
Hosseinpour	1.01	0.73	1.38
Hosseinpour	23.57	11.54	48.11
Mehmandar	2.36	1.62	3.46
Nasiri	7.6	3.14	18.4
Tavakoli	2	1.692	2.355
Yadollahi	7.37	5.02	10.8
Pooled odds ratio	4.346	2.558	7.384

Supplementary table 3: Details of odds ratio and 95% confidence interval of road related risk factor for mortality following traffic crash among included studies

Study	Odds ratio	95% confidence interval	
Slippery road			
Dastoorpoor	1.001	0.997	1.006
Dastoorpoor	1.001	0.674	1.507
Hasani	1.600	0.69	3.7
KhosraviShademani	1.790	0.78	2.8
KhosraviShademani	0.520	0.35	0.69
KhosraviShademani	0.100	0.001	1.13
KhosraviShademani	0.690	0.46	0.92
KhosraviShademani	1.170	0.9	1.44
KhosraviShademani	1.790	1.48	2.1
KhosraviShademani	0.810	0.47	1.15
KhosraviShademani	0.720	0.001	1.75
KhosraviShademani	0.130	0.008	1.14
KhosraviShademani	0.780	0.43	1.13
KhosraviShademani	0.520	0.001	1.53
KhosraviShademani	1.820	1.58	2.06
KhosraviShademani	1.210	0.79	1.63
KhosraviShademani	1.610	1.37	1.85
KhosraviShademani	0.470	0.17	0.77
KhosraviShademani	1.420	1.27	1.57
Lankarani	0.300	0.17	0.54
Lankarani	1.250	0.76	2.04
Lankarani	0.290	0.17	0.51
Lankarani	2.220	0.55	8.98
Lankarani	0.520	0.45	0.6
Lankarani	0.310	0.07	1.32
Lankarani	0.950	0.8	1.12
Pooled odds ratio	0.938	0.794	1.109
Suburban road			
Hasani	1.100	0.75	1.6
Hosseinpour	3.180	2.31	4.38
Hosseinpour	3.530	2.77	4.5
Khorshidi	0.590	0.58	0.6
Nasiri	2.300	1.2	4.5
Nasiri	0.900	0.3	2.8
Tavakoli	3.040	2.283	4.043
Pooled odds ratio	1.752	0.755	4.066
Urban road			
Hasani	0.920	0.35	2.77
Nasiri	0.900	0.3	2.45
Nasiri	1.440	0.6	3.5
Paravar	0.430	0.215	0.899
Tavakoli	0.855	0.683	1.069
Tavakoli	1.780	1.406	2.259
Tavakoli	4.820	4.253	5.453
Tavakoli	3.960	3.446	4.513
Tavakoli	4.790	3.887	5.908
Pooled odds ratio	1.763	1.078	2.883
Roadway defects			
KhosraviShademani	0.491	0.001	1.495
KhosraviShademani	1.520	1.14	1.9
KhosraviShademani	1.270	1.12	1.42
KhosraviShademani	2.930	2.19	3.67

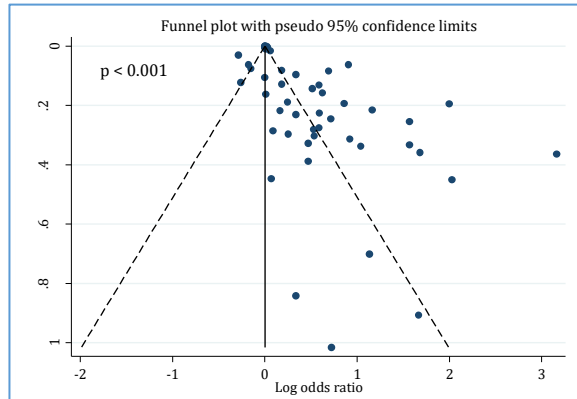
KhosraviShademani	4.340	3.71	4.97
KhosraviShademani	5.680	5.21	6.15
KhosraviShademani	0.420	0.001	1.15
KhosraviShademani	0.480	0.001	2.44
KhosraviShademani	0.850	0.68	1.02
KhosraviShademani	1.370	1.15	1.59
KhosraviShademani	1.320	1.18	1.46
KhosraviShademani	0.880	0.83	0.93
KhosraviShademani	6.400	5.8	7
KhosraviShademani	0.830	0.001	1.81
KhosraviShademani	1.130	0.98	1.28
KhosraviShademani	1.210	1.08	1.34
KhosraviShademani	5.290	4.94	5.64
KhosraviShademani	2.910	2.68	3.14
KhosraviShademani	1.550	1.05	2.05
KhosraviShademani	0.740	0.39	1.09
KhosraviShademani	6.160	5.86	6.46
KhosraviShademani	1.380	1.25	1.51
KhosraviShademani	2.050	1.77	2.33
KhosraviShademani	0.530	0.4	0.66
KhosraviShademani	0.892	0.827	0.957
Lankarani	6.510	4.58	9.25
Lankarani	3.890	1.72	8.82
Lankarani	2.310	1.46	3.65
Lankarani	7.830	5.87	10.43
Lankarani	3.610	1.97	6.6
Lankarani	3.440	1.83	6.48
Lankarani	0.590	0.31	1.15
Lankarani	8.450	6.64	10.75
Lankarani	2.470	2.22	2.75
Lankarani	0.710	0.61	0.83
Lankarani	10.020	7.69	13.05
Pooled odds ratio	2.150	1.59	2.905
Not flat and straight road			
KhosraviShademani	4.600	4.23	4.97
KhosraviShademani	1.330	1.14	1.52
KhosraviShademani	0.840	0.77	0.91
KhosraviShademani	1.770	1.69	1.85
KhosraviShademani	1.380	1.29	1.47
KhosraviShademani	0.570	0.21	0.93
KhosraviShademani	0.900	0.84	0.96
KhosraviShademani	1.260	1.06	1.46
KhosraviShademani	0.980	0.9	1.06
KhosraviShademani	1.320	1.23	1.41
KhosraviShademani	0.900	0.72	1.08
KhosraviShademani	0.690	0.001	1.69
KhosraviShademani	7.470	6.87	8.07
Lankarani	4.110	3.48	4.86
Lankarani	1.540	1.31	1.82
Lankarani	2.220	1.95	2.53
Pooled odds ratio	1.601	1.143	2.244

Supplementary table 4: Details of odds ratio and 95% confidence interval of weather related risk factor for mortality following traffic crash among included studies

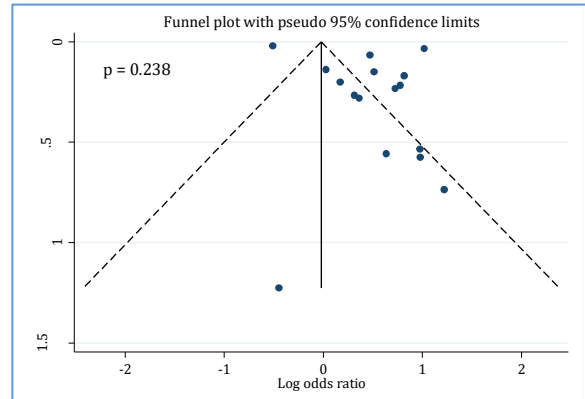
Study	Odds ratio	95% confidence interval	
Snowy or rainy			
Dastoorpoor	1.001	0.674	1.507
Dastoorpoor	1.001	0.997	1.006
Hasani	1.6	0.69	3.7
KhosraviShademani	56.84	56.2	57.48
KhosraviShademani	1.61	1.37	1.85
KhosraviShademani	1.82	1.58	2.06
KhosraviShademani	1.42	1.27	1.57
KhosraviShademani	1.17	0.9	1.44
KhosraviShademani	0.69	0.46	0.92
KhosraviShademani	0.1	0.001	1.13
KhosraviShademani	0.72	0.001	1.75
KhosraviShademani	0.47	0.17	0.77
KhosraviShademani	0.81	0.47	1.15
KhosraviShademani	0.52	0.35	0.69
KhosraviShademani	0.13	0.008	1.14
KhosraviShademani	0.78	0.43	1.13
KhosraviShademani	1.79	1.48	2.1
KhosraviShademani	0.52	0.001	1.53
KhosraviShademani	1.21	0.79	1.63
KhosraviShademani	1.79	0.78	2.8
Lankarani	0.3	0.17	0.54
Lankarani	0.52	0.45	0.6
Lankarani	0.95	0.8	1.12
Lankarani	0.29	0.17	0.51
Lankarani	2.22	0.55	8.98
Lankarani	0.31	0.07	1.32
Lankarani	1.25	0.76	2.04
Pooled odds ratio	0.924	0.314	2.719
Cloudy or foggy			
Hasani	2.11	0.97	4.5
KhosraviShademani	2.1	1.9	2.3
KhosraviShademani	0.74	0.66	0.82
KhosraviShademani	1.47	1.36	1.58
KhosraviShademani	0.41	0.001	1.13
Lankarani	1.92	1.22	30.3
Lankarani	1.3	1.13	1.49
Pooled odds ratio	1.391	0.956	2.024
Spring			
Hasani	0.83	0.55	1.26
Pooled odds ratio	0.83	0.548	1.256

Summer			
Hasani	0.87	0.59	1.29
Hosseinpour	1.34	1.01	1.79
Mehmandar	0.81	0.64	1.02
Sherafati	0.499	0.155	1.608
Sherafati	6.122	0.505	74.179
Pooled odds ratio	0.968	0.69	1.357
Autumn			
Hasani	1.11	0.78	1.58
Hosseinpour	1.17	0.83	1.63
Mehmandar	2.19	1.64	2.91
Sherafati	0.018	0.001	0.404
Sherafati	0.076	0.014	0.413
Pooled odds ratio	0.898	0.467	1.723
Winter			
Mehmandar	6.95	4.67	10.34
Sherafati	0.501	0.008	33.283
Sherafati	0.483	0.13	1.794
Pooled odds ratio	1.557	0.158	15.294

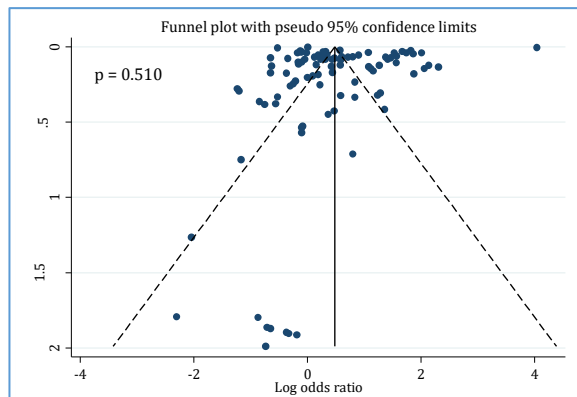
Age



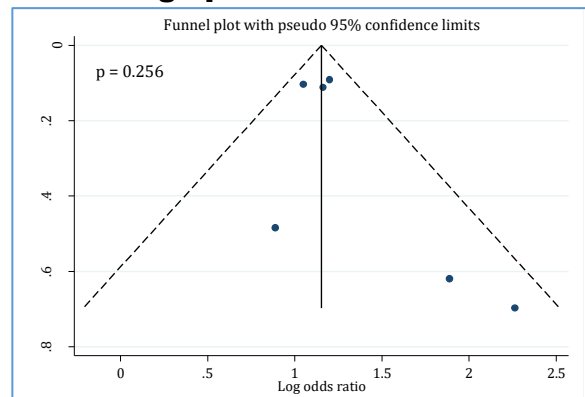
Gender



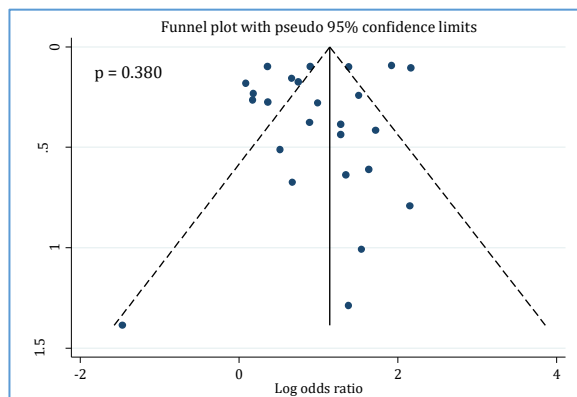
Road related risk factors



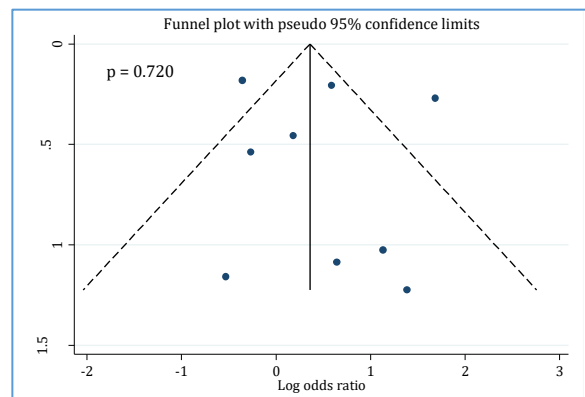
Exceeding speed limit



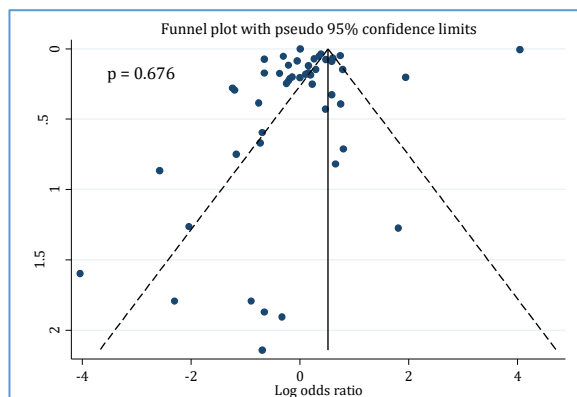
Road user related risk factors



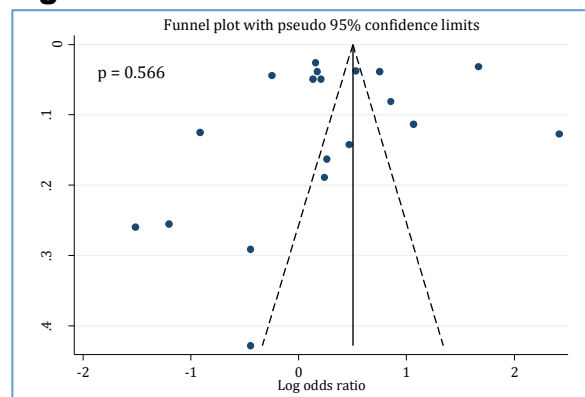
Vehicle related risk factors



Weather related risk factors



Light condition



Supplementary figure 1: Publication bias for assessment of risk factors or mortality of mortality after road traffic injury in Iran.